DM69 — Lecture 12

Lecture 12 — April 27

- Sections 13.5–13.6 in Korte and Vygen (handed out on April 20).

Problems for April 29

1. Problem 3.74 in Bang-Jensen and Gutin
2. Explain the example on pages 154–158 in Bang-Jensen and Gutin.
3. Problem 3.73 in Bang-Jensen and Gutin.
4. Problem 3.77 in Bang-Jensen and Gutin.
5. Give an efficient algorithm for finding a maximum matching in a tree.
6. Problem 16.1-3 in Cormen.
7. Read Section 16.5 in Cormen. If you have any questions, we will discuss them.
8. Problem 16.5-2 in Cormen.

Exam questions

For the material we have covered so far, the following are the possible main questions.

1. Shortest paths in weighted graphs
2. The maximum (s,t)-flow problem and the minimum (s,t)-flow problem
3. Polynomial algorithms for maximum flows
4. Minimum cost flows
5. Matchings: characterizations and algorithms
6. The primal-dual algorithm for the transportation and the assignment problem
7. The RSA cryptosystem
8. Matroids and the greedy algorithm